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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

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For: **METHOD OF MEASURING THE LUMINESCENCE EMITTED IN A
LUMINESCENT ASSAY**

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Assistant Commissioner for Patents
Washington DC 20231

Sir:

PRELIMINARY AMENDMENT

Preliminary to examination of this application on the merits, please amend this application as follows.

In the Claims:

Please cancel claim 1 without prejudice.

Please add new claims **18-34** as follows:

18. (New) A method of measuring the luminescence emitted in the measuring medium of a luminescent assay, said method being capable of correcting the variations of luminescence due to the optical properties of the measuring medium, said method comprising:

(a) providing an exciting light source for irradiating a luminescent assay wherein said assay, upon excitation, emits luminescence at two different wavelengths, λ_1 and λ_2 ;

(b) irradiating said assay with said exciting light source, wherein said light source is spaced apart from said assay to form a gap therebetween;

(c) splitting the luminescence emitted by the assay at wavelengths λ_1 and λ_2 following excitation, wherein the luminescence at λ_1 is emitted by a reference compound and reflects the optical properties of the measuring medium, and the luminescence at λ_2 is emitted by a tracer compound and is proportional to the amount of analyte;

(d) collecting the luminescence emitted at wavelengths λ_1 and λ_2 ; and

(e) measuring the luminescence emitted at wavelength λ_2 and correcting said emission on the basis of the luminescence emitted at wavelength λ_1 .

19. (New) The method of claim 18 further comprising a built-in method of correcting the measurement of the luminescent emission made at wavelength λ_2 , consisting of fixing a counting rate on a channel measuring the luminescent emission of the reference compound at wavelength λ_1 , and then, when this counting rate is reached, triggering the end of the measurement on a channel measuring the luminescent emission at wavelength λ_2 .

20. (New) The method of claim 18 wherein the luminescence emitted at λ_2 results from an energy transfer.
21. (New) The method of claim 18 wherein the luminescence emitted by the reference compound and by the tracer compound, at wavelengths λ_1 and λ_2 respectively, are measured simultaneously.
22. (New) The method of claim 18 wherein the correction of luminescence is calculated, said calculation comprising dividing the luminescence at λ_2 by the luminescence at λ_1 to obtain the corrected luminescence.
23. (New) The method of claim 18 wherein the tracer compound and the reference compound are the same compound.
24. (New) The method of claim 18 wherein the tracer compound and the reference compound are different compounds.
25. (New) The method of claim 18 wherein the tracer compound and/or the reference compound are fluorescent compounds.

26. (New) The method of claim 18 wherein the tracer compound and/or the reference compound are rare earth chelates or cryptates.
27. (New) The method of claim 18 wherein the measurement of the luminescent emission at wavelength λ_2 is made by a time-resolved method.
28. (New) The method of claim 18 wherein the emission lifetime of the tracer compound and/or of the reference compound are more than one microsecond.
29. (New) The method of claim 18 wherein the corrected luminescence is measured with a picomol/liter measuring sensitivity.
30. (New) The method of claim 18 further comprising focusing an exciting beam from said light source to said assay with a lens.
31. (New) The method of claim 18 further comprising filters and lenses for directing the exciting light beam on the assay.
32. (New) The method of claim 18 further comprising one or more filters for splitting the luminescence emitted by the assay at wavelengths λ_1 and λ_2 following excitation.

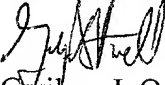
33. (New) The method of claim 18 further comprising one or more photomultipliers for collecting the luminescence emitted by the assay at wavelengths λ_1 and λ_2
34. (New) The method of claim 18 further comprising filters and lenses for collecting the luminescence emitted by the assay at wavelengths λ_1 and λ_2 following excitation.

REMARKS

Claim 1 was pending. Claim 1 has been canceled. Claims 18-34 have been added. Support for claims 18-34 can be found throughout the specification and claims. Upon entry of the present amendment, claims 18-34 will be pending. No new matter has been added.

Applicants believe all of the claims presently before the Examiner patentably define the invention over the prior art and are otherwise in condition for ready allowance. Applicants respectfully request early notification of the same.

Respectfully submitted,


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